

<b>FAN POWER CONSUMPTION</b>	<b>MECH-4C</b>
PROJECT NAME:	DATE:
NOTE: Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp for Constant Air Volume (CAV) Fan Systems or Variable Air Volume (VAV) Systems when using the Prescriptive Approach. See <b>Power Consumption of fans §144(c)</b> .	

A	B	C	D	E	F
FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY		NUMBER OF FANS	PEAK WATTS B x E x 746 / (C x D)
		MOTOR	DRIVE		

<b>Totals and Adjustments</b>															
FILTER PRESSURE ADJUSTMENT Equation 144-A in §144(c) of the Energy Standards.  A) If filter pressure drop (SP <sub>a</sub> ) is greater than 1 inch W. C. or 245 Pascal then enter SP <sub>a</sub> on line 4. Enter Total Fan pressure drop across the fan (SP <sub>f</sub> ) on Line 5.  B) Calculate Fan Adjustment and enter on line 6.  C) Calculate Adjusted Fan Power Index and enter on Row 7	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">1) TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)</td> <td style="width: 20%;"></td> </tr> <tr> <td>2) SUPPLY DESIGN AIRFLOW (CFM)</td> <td></td> </tr> <tr> <td>3) TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2)<sup>1</sup></td> <td style="text-align: center;">W/CFM</td> </tr> <tr> <td>4) SP<sub>a</sub></td> <td></td> </tr> <tr> <td>5) SP<sub>f</sub></td> <td></td> </tr> <tr> <td>6) Fan Adjustment = 1-(SP<sub>a</sub> – 1)/SP<sub>f</sub></td> <td></td> </tr> <tr> <td>7) ADJUSTED FAN POWER INDEX (Line 3 x Line 6)<sup>1</sup></td> <td style="text-align: center;">W/CFM</td> </tr> </table>	1) TOTAL FAN SYSTEM POWER (WATTS, SUM COLUMN F)		2) SUPPLY DESIGN AIRFLOW (CFM)		3) TOTAL FAN SYSTEM POWER INDEX (Row 1 / Row 2) <sup>1</sup>	W/CFM	4) SP <sub>a</sub>		5) SP <sub>f</sub>		6) Fan Adjustment = 1-(SP <sub>a</sub> – 1)/SP <sub>f</sub>		7) ADJUSTED FAN POWER INDEX (Line 3 x Line 6) <sup>1</sup>	W/CFM
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1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 w/cfm for Constant Volume systems or 1.25 w/cfm for VAV systems.															